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# Endogenous Knowledge and Natural Conservation of Agricultural Products in West Cameroon

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*Abstract*

This article deals with the contribution of endogenous knowledge in the process of conservation of food products in West Cameroon. Endogenous knowledge is deepest in West Cameroon. In recent decades, the modernization of farming techniques has disrupted the realities and habits of populations. It is clear that despite this surge in modernism, many populations in West Cameroon have remained attached to their ancestral realities. However, crops that are perishable foods face numerous risks of rot. It is in this sense that this article aims to explore some mechanisms for the conservation of food products in West Cameroon, in an endogenous and cultural context. The postulate that emerges from this initiative is that rural populations have developed resilience strategies in the face of the problem of product conservation. To achieve such a result, it was important to use varied methodologies, both through documentary collection, field data collection, and verification and validation of the extracted information. Thus, it appears from the analyzes carried out that there are several endogenous strategies for preserving food products in West Cameroon, including drying, smoking and exposure to sunlight.

*Keywords*: conservation, endogenous knowledge, food products, globalization.

## 1. Introduction

### 1.1 *Context and rationale*

Food production has always been an essential income-generating activity. The construction of the Bamilékés or West Cameroonian society is based on manual activities, trade, breeding, but even more on agriculture. Agriculture is the primary supplier of foodstuffs in the region, but the problem that arises remains that of preserving the products resulting from this agriculture. In a simplified way, the populations of the region have thought up techniques for preserving foodstuffs based on drying, smoking, sunshine, etc. The writing of this article involves a careful reading of the documents, supported by oral, archaeological, anthropological collections, etc.

The problem raised in the present study is of a practical nature. Indeed, it aims to demonstrate the implications of local traditional knowledge in the process of protecting biodiversity in West Cameroon. In addition, the study seeks to answer a central question which is to know the degree of involvement of tradition and local agricultural knowledge in methods of nature conservation in West Cameroon?

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1.2 *Methodology*

To resolve the problem posed by this research theme, we had to explore sites in the region and use specific techniques ranging from direct field studies to thematic studies.

To provide an interesting and objective result to this problem, a combination of methods was required both in the collection and processing of the data collected.

1.2.1 *Presentation of the study area*

With an area of 13,890 km² and culminating at approximately 2,000 m altitude (Kuete & Dikoume, 2000), the West Cameroon highlands region includes both the Bamiléké country and the Bamoun country. It is a region where a very interesting diversity of flora, fauna and landscape (natural) abounds (Djiopé, 2022). As for the Bamiléké country, it is a block of land which, located in the very center of the western region of Cameroon, is rich in cultural diversity and whose unique history and the dynamism of its peoples is imposing (Dongmo et al., 1972).

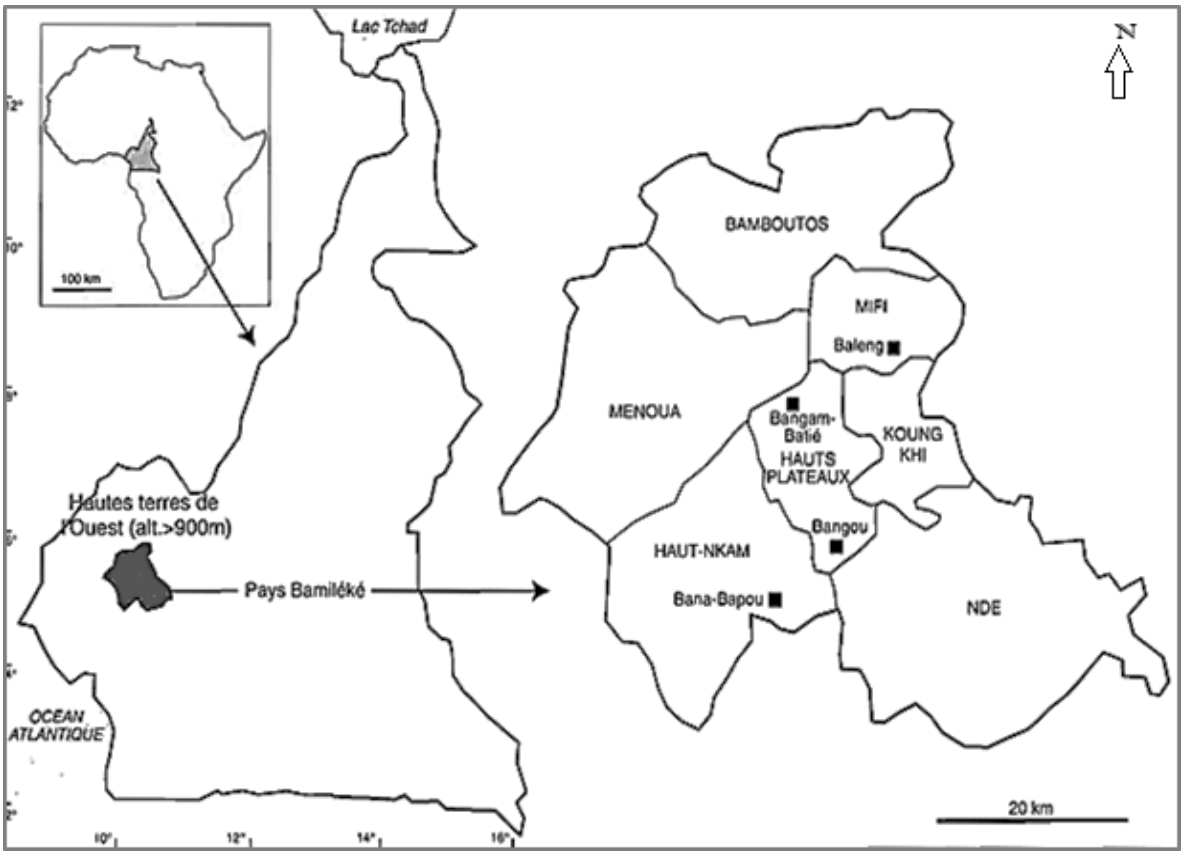



Figure 1. Location map of the West Cameroon region

The Bamiléké region presents itself as a rich wooded savannah, reigning with a good number of botanical zoo individuals who are an integral part of the cultural life of the people who live there. The Bamilékés are found in five (five) zones of the western Cameroonian region, namely: Menoua, Mifi, Ndé, Koung-Khi, Hauts-plateaux, Haut-Nkam and Bamboutos. It is in this region of Cameroon that the Bamilékés originate, who are included in the Grass-Fields region.

### 1.2.2 *Data collection and processing*

To carry out this work, we consulted archives of various kinds including written and iconographic archives from the Ministry of Wildlife and Forestry, Wildlife and the Environment in Cameroon; we also carried out interviews with ecological and environmental leaders in Cameroon, without forgetting environmental agents and Cameroonian public opinion regarding environmental issues and precisely that of the State, the future and the protection of forests in Cameroon.

Given that written sources alone are not enough to write history, we have carried out field trips taking advantage of all kinds of sources of information available to us in order to reveal the historical truth that underlies tends our subject. We carried out a careful investigation and by collecting information from various sources including oral by a sampling of informants according to the different regions studied, which are seen as being the living museum of all the socio-cultural productions capitalized by people without writings (Gormo, 2004: 17), written, iconographic, etc., which will lead us to specific information whose analysis and interpretation would be likely to produce concrete results. Claiming to be historical, our research will be focused on consulting written, oral, iconographic and multimedia sources. On this subject, we will consult various schools of thought. Concerning the iconographic sources, they will mainly consist of photos, results of our various field trips, as well as maps, plans and other image sources which would allow us to better understand the context in which our research takes place.

A systemic approach to the management of natural resources and the problem of hunger is also envisaged. After collecting this data, it will go through a rigorous selection. We will analyze and sift through the selection the data collected in the field. The comparison of the data collected will allow us to produce true and rich work. This work will allow us to bring out the data necessary to develop our memory. Writing a complete history can only be done with written sources. The diversification of sources will allow us to better understand the question of our research. Data collection was also done through the collection of coordinates and GPS tracks.

From then on, we organized our ideas into four (04) main articulations, namely: the presentation of some (agricultural) cultures of the geographical location of sacred forests cultures as a geopolitical and strategic element; and finally, the cosmogony of the divine and modes of transmission of endogenous cultural knowledge through the natural environment.

## 2. Results

The work carried out allowed us to arrive at a certain number of observations which serve as results. It is clear that in the West Cameroon region, the main androgenic strategies for preserving food products are essentially drying, smoking and rotation.

### 2.1 *Drying: Innovation in practice*

Drying is an activity which consists of spreading the harvested products in such a way as to empty them of the water molecules they contain. This activity makes it possible to limit the action of water which, with humidity, more quickly alters the resources which then enter into a situation of putrefaction.

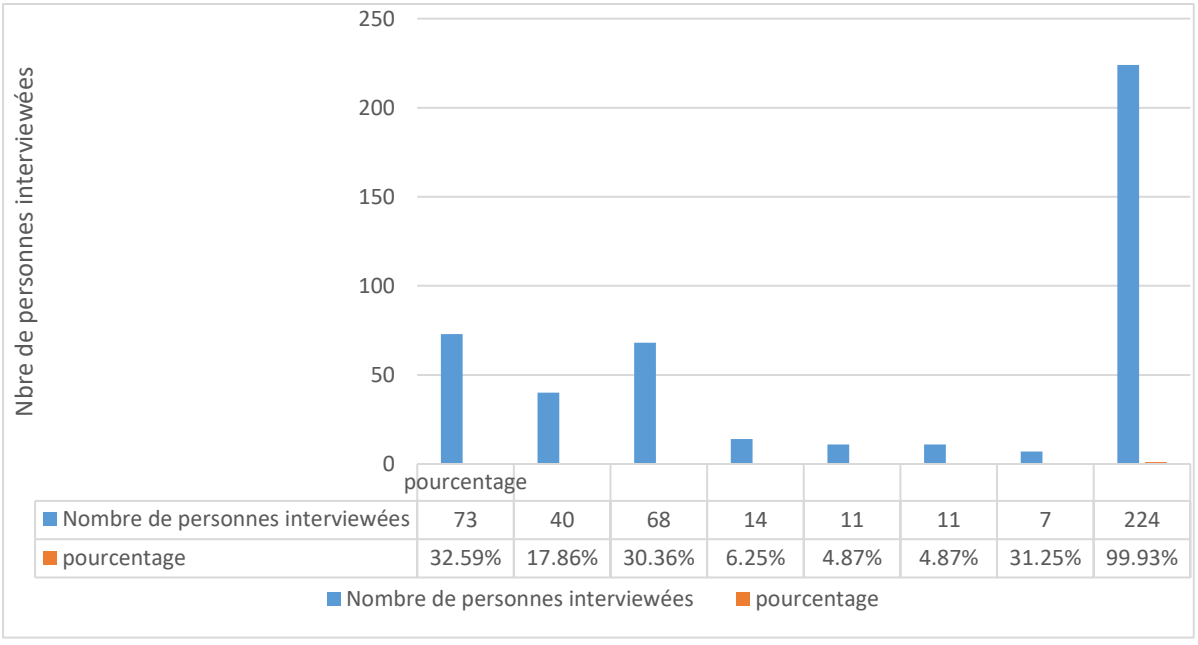
Figure 2. Some granaries set up for the conservation of corn in Bafoussam

Source: Maroti Djiope, for the ERAIFT-UNESCO Project, 2022

Drying as we know it in endogenous practices in West Cameroon has evolved considerably. From simple display to the creation of traditional warehouses, drying techniques now include devices to optimize the mass conservation of food products. We thus move from small chimney attics (nking), to attics built according to certain standards, larger, wider and more sophisticated. We note that despite the creation of modern granaries (Fofiri, 2016), traditional practices remain the order of the day given that in most village households, traditional drying and preservation techniques remain prominent due to their accessibility and ease of execution. Despite its various advantages, it is clear that this endogenous drying technique is gradually declining, hence the need for the resurgence of its popularization.

Figure 3. Percentage of people interviewed who agree with the preponderance of drying as a local knowledge of food preservation, West Cameroon

Source: Field data



Drying is carried out by the use of converted attics. These granaries, the fruit of local endogenous knowledge, are excellent means of preserving cereals and legumes. Food leaves thereby dried and stored in attics. Still other foods, especially of animal origin, are smoked in order to increase the life expectancy of the items tenfold. Drying is carried out following specific steps. First, it is done when the seeds are harvested, i.e. during the period covering the end of November until January-February. Drying represents a widespread resource conservation technique here. For the populations, drying cannot be excluded from agrarian practices. Natural drying keeps the food with a natural flavor (Kengfack, 2023). Alongside this conservation practice, it must be said that drying warehouses are most often converted attics, built in an artisanal manner (See the figures above). Legumes are not left out in this process. Indeed, to slow down the rotting of the latter, local knowledge encourages the cutting and drying of vegetables. This strategy makes it possible to increase the life of a vegetable and thus facilitates its preservation. Drying lofts are even more cost effective and simplify physical expenses. Indeed, drying strategies based on the construction of traditional drying granaries are done in open fields. Most of the time, this technique is a solution to the sometimes very expensive transport of fresh products. Drying lofts are made with temporary materials and on piles. This construction on stilts avoids the risk of flooding of attics, but also of attacks by small rodents. The suspension of the conservation attic therefore presents itself as an ingenious idea emanating from local knowledge. Not far away, local populations also use smoking techniques as a means of preserving food resources.

### 2.2 *Smoking: Between "old" and "new" practice*

Smoking is the action of drying food by flames. This strategy is used much more for lipid foods (meat, fish, etc.). Smoking is very widespread in West Cameroon, and particularly in the Menoua department. In the district of Dschang by Bafou for example, baskets woven from bamboo are most often hung on top of the wood fire in the kitchen. This basket allows you to store and dry food. The construction of the procedure for conserving food resources therefore presents itself as an empirical art, transmitted generationally. Smoking is therefore a significant asset in the process of preserving food products (Fofiri, 2014). A practice that continues to this day and whose use still seems as effective. Not far from these practices there is also the making of grains with wood fire ash.

### 2.3 *Conservation by "sunshine": An adaptation strategy in periods of high temperature*

"Insolation" is seen in the context of this work as the process of burying foods (especially tubers) in the ground in order to maintain their freshness. In West Cameroon, insolation has become a very widespread conservation strategy in the most isolated regions, which are those which have mastered this practice the most. It comes from the experiences of everyone who observed that, in the absence of technologies for preserving food products (fridges, freezers, refrigerators, etc.), it is imperative to think of natural and less expensive alternatives. It must be said that in the past, the possession of such devices was impossible. Thus, the products (food crops) harvested and in particular the tubers, are directly released into moist and dry soil if there is no need to use them directly. This conservation strategy cannot, however, be applied for a long period of time, otherwise the product will either rot or germinate.

Local techniques present insolation as a process for preserving agricultural products. "Insolation" keeps the product at natural temperature, suitable for conservation. In this way, the putrefaction process is delayed. The only drawback is that the product that is placed in the ground risks, in the long run, germinating. The "sunshine" process is therefore considered a firewall against periods of extreme heat. Preserved foods are intended for consumption in a relatively short

time (between 5 and 7 days). The exposure process takes into consideration certain requirements regarding the products to be preserved. Firstly, the products are mostly tubers, then you have to be reassured that these products have not already started the germination process; secondly, you must reassure yourself that the product has not been scratched or injured; thirdly, the food must not be wet, and finally, it is important to bury it in dry but fresh soil.

In reality, this strategy is a form of resilience in the face of global warming. The populations of West Cameroon have therefore developed quite specific knowledge about the climate. In this way, the sunning processes make it possible to keep food fresh, due to the temperature of the soil which remains cool at a certain depth, regardless of the season.

## 3. Discussion and conclusion

Querbes and Vittoz (1967) highlight drying as the most common means of preservation, particularly in the northern part of Cameroon. This logic of thought is shared by many other authors, who reveal that this practice is also applicable in other regions of the country. Therefore, Fofiri (2016) points out that strategies based on storage infrastructures are means of (dry) preservation of cereals. Food products are part of the daily diet of rural populations. The UN (1998) reviews local means of conserving food resources in order to limit waste.

In West Cameroon, these products are widely requested and cultivated. However, their use poses a problem due to their rapid rotting for the most part, or their destruction by insects and pests. To limit these actions, endogenous strategies have been used for this purpose. Local endogenous knowledge sometimes opts for drying, smoking, basking, etc. endogenous practices are therefore an asset in the fight against food waste and loss, but are only increasingly overtaken by modernization which offers more sophisticated methods (fridges, freezers, etc.) of conservation, although the latter represent dangers for the environment through the greenhouse effects they emit.

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